

Abstract Of The Disclosure

An optical network incorporates one of wavelength based or lightpath link based pre-emphasis to reduce the power fluctuation range at optical receivers in the network. Power output from channel transmitters can be varied on a per channel basis to minimize the effects of non-constant per-channel gain as a function of wavelength. Pre-emphasis circuitry coupled to the transmitters imposes an optical power profile on transmitter output in accordance with an inverse of the gain characteristic of network amplifier elements raised to an exponent which is equal to or less than the number of spans through which an optical signal is transmitted.